



Babu Banarasi Das Institute of Technology & Management

AKTU College Code - 054

Department
of
**ELECTRONICS
&
COMMUNICATION
ENGINEERING**



A NBA ACCREDITED DEPARTMENT

**ECE NEWSLETTER
VOLUME I
DEC-2023
(2023 - 2024)**





VISION OF INSTITUTE

“To become a leading institute of providing professionally competent and socially responsive technocrats with high moral values”

MISSION OF INSTITUTE

M1: To create an eco-system for the dissemination of technical knowledge, to achieve academic excellence.

M2: To develop technocrats with creative skills and leadership qualities, to solve local and global challenges.

M3: To impart human values and ethics in students, to make them socially and Eco-friendly responsible.

VISION OF DEPARTMENT

“To emerge as a globally recognized center of excellence in engineering education, fostering innovation, ethical values, entrepreneurial spirit and leadership qualities to create professionals who contribute meaningfully to society and industry”

MISSION OF DEPARTMENT

M1: To achieve global standards of excellence through continuous synchronization with the latest technologies and innovation.

M2: To adopt effective pedagogical methods that bridge theoretical concept with practical applications for deeper understanding.

M3: To inculcate professional ethics, self learning abilities, entrepreneurial skills and leadership qualities for holistic professional success.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Graduate of the program shall be adaptive to emerging technologies to pursue their career in hardware and software industry.

PEO 2: Graduate of the program shall have technical excellence to augment their proficiency towards higher education and progress in research.

PEO 3: Graduate of the program shall have professional and ethical attitude to uphold team work skills and multidisciplinary approach.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1: In depth theoretical & practical knowledge of modern engineering in electronic circuitry .

PSO 2: Design and analyze modern communication systems to meet the present and future needs of industry with cost effective solutions.

DIRECTOR'S MESSAGE-

I convey my compliments to all associated with Electronics and Communication Engineering department for their efforts and conviction. I appreciate the efforts and hard work of the faculty, staff and students of Electronics and Communication Engineering department.

I would also like to congratulate all the contributors and editorial team for such a wonderful newsletter.

My best wishes to the team for achieving new heights.

Prof (Dr.) Shailendra Singh Chauhan
DIRECTOR
BBDITM

HOD'S MESSAGE-

The vision of the department is to nurture successful engineers and in this pursuit, all the staffs and faculties of the department continuously strive to bring out the best from the student's talent pool.

We are now a NBA Accredited Department and to keep up the same momentum and temperament from all of us towards the excellent work, looking forward to the upcoming semester with lots of expectations from all the stakeholders.

I wish you the most productive year ahead!

Prof (Dr.) Shailendra Tahilyani
HOD (EC)
BBDITM

EDITOR'S MESSAGE-

Dear Readers,

Glimpse of the Newsletter takes us through the milestones achieved by our and faculty members in the last six months.

We have tried our best to make sure that the newsletter represents all the departmental achievements/activities which happened to strengthen our departmental vision.

Thanks & Regards

Mr. Pankaj Verma
Assistant Professor
ECE, BBDITM

➤ **EVENT ORGANIZED @ ECE DEPARTMENT**

1. Induction Program

Objective of the event: -

The goal of engineering education is to train engineering graduates in branch of admission, have a holistic personality and must have desire to serve society and nation. It is expected that an engineering graduate work for solving the problems of society using the modern technologies and practices. That needs the broad understanding of the society and relationships. It is needed to cultivate the human values in engineering graduates to fulfill his responsibilities as an engineer, a citizen and a human being.

Department of electronics and communication, BBDITM, Lucknow conducted induction program for students on 25/10/2023, to overcome issues like their differences in education background, their interest towards engineering etc., it is necessary to create an environment for students so that they feel comfortable, find their interest and explore their inner beings, create bonding with other students, establish relation with teachers, work for excellence, get a broader view of life and practice human values to build characters.

Glimpses of Event:



The Induction Program covers the various activities which enables them to overcome all such issues and motivates them to perform well in their chosen branch of Electronics and communication engineering.

2. Debate Competition on occasion of National Education Day



INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)


DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
 IN COLLABORATION WITH
 INSTITUTION'S INNOVATION COUNCIL

-BRINGS YOU-

DEBATE

On National Education Day

Registration using:



08 NOV | WED
TIMING:- 11:00 A.M ONWARDS
VENUE:- ROOM NO 413, 4TH FLOOR, E-BLOCK (BBDITM)

E-BLOCK (BBDITM)
 VENUE:- ROOM NO 413, 4TH FLOOR
 TIMING:- 11:00 A.M ONWARDS
08 NOV | WED

Event's Brief:

Department of Electronics and Communication, BBDITM organized an event with the collaboration of IIC (Institution Innovation Council) to celebrate “National Education Day” on 08th Nov 2023 from 11:00 AM onwards. On November 11, the entire nation celebrates National Education Day like a festival. Students of the department prepared their points on the debate topic” National Education Day” to give their tribute to Maulana Abul Kalam Azad for his commendable contribution to the education sector.

The basic learning of the event was to understand and develop the role of education to focus on various ways to curb pollution. Students need to develop methodologies to mitigate the pollution menace. Students contributed with ponder able point upon the same issue

Objective of the event: -

1. The objective of organizing this event is to understand the National Education Policy.
2. To promote consciousness about the role of education in dealing with menace of pollution across India.

Benefits in terms of Learning/ Skill/ Knowledge Obtained: -

On November 11, the entire nation celebrates National Education Day like a festival. Students of the department prepared their points on the debate topic” National Education Day” to give their tribute to Maulana Abul Kalam Azad for his commendable contribution to the education sector.

The basic learning of the event was to understand and develop the role of education to focus on various ways to curb pollution. Students need to develop methodologies to mitigate the pollution menace. Students contributed with ponder able point upon the same issue.

Events Photo:



Student Participants for the Debate competition

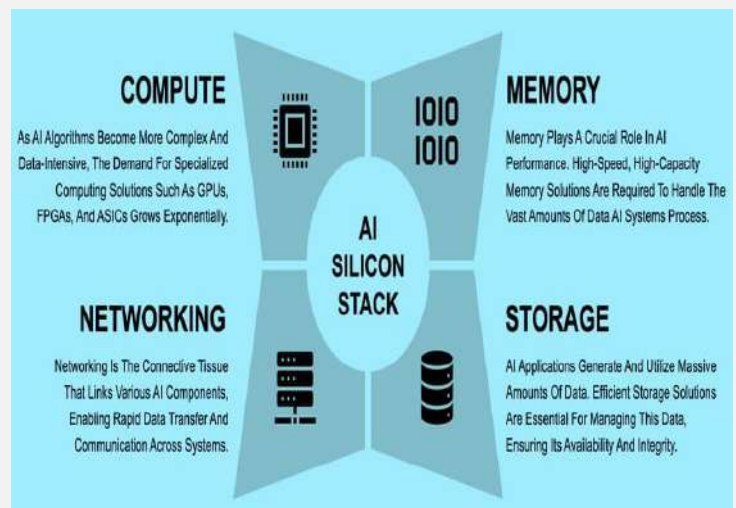
➤ FACULTY CORNER :

❖ AI Silicon Opportunity: Revolutionizing Memory, Storage, Compute, & Networking :

Grab a front-row seat to semiconductor pioneers shaping the future with AI-specific custom silicon chips.

The artificial intelligence (AI) market is rapidly expanding, offering significant growth opportunities for the semiconductor industry. This growth is mainly due to the increasing demand for AI chips, essential for executing AI workloads. In 2023, the revenue from semiconductors designed for AI workloads will reach \$53.4 billion, representing a substantial 20.9% increase from 2022. This growth indicates the reliance on specialized chips to handle complex AI processes.

This statistic underlines the crucial role of AI in driving growth in the semiconductor industry. As AI technology advances and integrates into various sectors, the demand for specialized AI chips will surge, presenting lucrative opportunities for semiconductor companies. The focus on developing and supplying AI-specific semiconductors is not just a response to current market trends but a strategic move toward capturing a significant share of the burgeoning AI market. On top of that, the rise of AI marks a substantial departure from traditional technology paradigms, emphasizing the critical role of hardware in enabling advanced AI applications.



Semiconductor companies, historically focused on mass-producing generic components, now find themselves at the forefront of a technological revolution. These companies can gain a competitive edge in a rapidly evolving market by providing unique memory, storage, computing, and networking solutions.

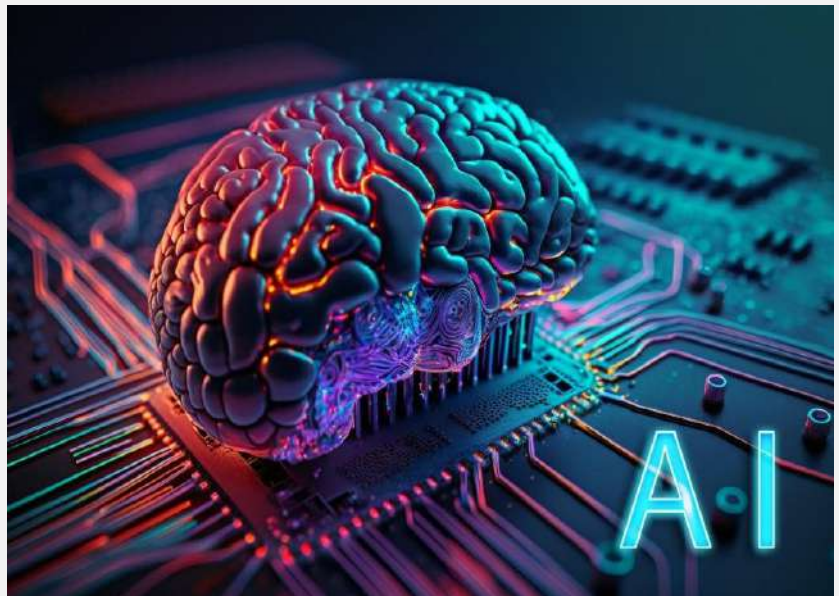
Mr . Navneet Kumar Pandey
Assistant Professor
Electronics & Communication Engineering

➤ **STUDENT CORNER :**

❖ **Artificial Intelligence**

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.

As the hype around AI has accelerated, vendors have been scrambling to promote how their products and services use it. Often, what they refer to as AI is simply a component of the technology, such as machine learning. AI requires a foundation of specialized hardware and software for writing and training machine learning algorithms. No single programming language is synonymous with AI, but Python, R, Java, C++ and Julia have features popular with AI developers.



In general, AI systems work by ingesting large amounts of labeled training data, analyzing the data for correlations and patterns, and using these patterns to make predictions about future states. In this way, a chatbot that is fed examples of text can learn to generate lifelike exchanges with people, or an image recognition tool can learn to identify and describe objects in images by reviewing millions of examples.

Dipika Srivastava
2000540310013
EC4



IoT, or the Internet of Things, is a network of interconnected devices that communicate and share data via the internet. It enables common things to gather, transmit, and receive data, hence increasing automation, efficiency, and convenience. From smart homes and wearable devices to industrial automation and smart cities, IoT is transforming many facets of our lives. Its rise is being driven by technological advancements, which are paving the way for a more interconnected and smarter society.

Applications of the Internet of Things:

Smart Homes: IoT has transformed home automation by providing a myriad of conveniences such as smart lighting, thermostats, security cameras, and appliances. With IoT-enabled equipment, homeowners can remotely control many parts of their homes via smartphone apps or voice commands, improving comfort, security, and energy efficiency.

IoT plays an important role in remote patient monitoring, wearable health monitors, and smart medical devices. These advancements allow healthcare providers to monitor patients' health in real time, measure vital signs, and provide individualized care, ultimately improving patient outcomes and lowering healthcare expenditures.



Smart Cities: The Internet of Things enables the development of smart cities by maximizing resource use, boosting public services, and improving urban infrastructure. From smart transportation systems and trash management to environmental monitoring and emergency response, IoT technologies enable municipal governments to address urban challenges more effectively and create sustainable urban environments.

Industrial Automation: IoT-driven automation is transforming manufacturing operations, supply chain management, and predictive maintenance. Manufacturers may enhance efficiency and reduce downtime by putting IoT sensors in machinery and equipment.

Challenges

IoT deployment presents problems such as data privacy, interoperability, and cyber security hazards, despite its promise for transformation. To address these problems, strong legal frameworks, industry standards, and cyber security measures are required to protect data and ensure the smooth integration of IoT devices.

Looking ahead, the expansion of 5G technology, edge computing, and artificial intelligence promises even greater improvements in the Internet of Things. These breakthroughs will propel the rise of IoT ecosystems, creating new opportunities for innovation and driving digital transformation across industries.

Conclusion:

As we embrace connectivity and digitization, the Internet of Things is a tremendous force pushing innovation and transforming our technology interactions. With its numerous uses and revolutionary potential, IoT has the potential to transform industries, improve quality of life, and pave the way for a more connected and sustainable future. Understanding and utilizing the power of IoT will help students and future innovators shape the technology landscape of tomorrow.

Meher Fatima
2000540310024
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➤ **FDP attended / Patent / Research Paper published by faculty members-**



Dr. Rupali Agarwal
Associate Professor
Electronics & Communication Engineering

Events Attended

[1] Participated in one week **FDP** on topic “Trends in Technological Intelligence 2023” organized by Department of Electronics & Communication Engineering and Electrical Engineering, BBDNIIT Lucknow during 21-25 Aug 2023.

[2] Participated in one week **FDP** on topic “Artificial Intelligence for Sustainable Development” organized by Department of Computer Science Engineering, School of Engineering, BBDU Lucknow during 03-07 Oct 2023.



Mr. Pankaj Verma
Assistant Professor
Electronics & Communication Engineering

Events Attended

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Mr. Amit Kumar Singh

Assistant Professor

Electronics & Communication Engineering

Events Attended

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Dr. Abhimanyu Kumar Yadav

Associate Professor & DI

Electronics & Communication Engineering

Events Attended

[1] Participated in one week **FDP** on topic “Artificial Intelligence for Sustainable Development” organized Department of Computer Science and Engineering, School of Engineering, Babu Banarasi Das University by during October 03, 2023 to October 07, 2023.

[2] Participated in one week **FDP** on topic “Entrepreneurship Development” organized by I.T.S Engineering College, Greater Noida during 19 June 2023 to 02 July 2023.



Mr. Navneet Kumar Pandey

Assistant Professor

Electronics & Communication Engineering

Events Attended

[1] Participated in one week **FDP** on topic “Trends in Technological Intelligence 2023” organized by Department of Electronics & Communication Engineering and Electrical Engineering, BBDNIIT Lucknow during 21-25 Aug 2023.

[2] Participated in one week **FDP** on topic “Artificial Intelligence for Sustainable Development” organized by Department of Computer Science Engineering, School of Engineering, BBDU Lucknow during 03-07 Oct 2023.

**Mr. Diwakar Singh**

Assistant Professor

Electronics & Communication Engineering

Events Attended

[1] Participated in one week **FDP** on topic “Trends in Technological Intelligence 2023” organized by Department of Electronics & Communication Engineering and Electrical Engineering, BBDNIIT Lucknow during 21-25 Aug 2023.

[2] Participated in one week **FDP** on topic “Artificial Intelligence for Sustainable Development” organized by Department of Computer Science Engineering, School of Engineering, BBDU Lucknow during 03-07 Oct 2023.

**Mr. Ravi Shankar**

Assistant Professor

Electronics & Communication Engineering

Events Attended

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[2] Participated in one week **FDP** on topic “Artificial Intelligence for Sustainable Development” organized by Department of Computer Science Engineering, School of Engineering, BBDU Lucknow during 03-07 Oct 2023.

**Mr. Kishan Kumar**

Assistant Professor

Electronics & Communication Engineering

Events Attended

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Ms. Keerti Mishra

Assistant Professor

Electronics & Communication Engineering

Events Attended

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Mr. Rajeev Singh

Assistant Professor & DI

Electronics & Communication Engineering

Events Attended

[1] Participated in one week **FDP** on topic “Trends in Technological Intelligence 2023” organized by Department of Electronics & Communication Engineering and Electrical Engineering, BBDNIIT Lucknow during 21-25 Aug 2023.

[2] Participated in one week **FDP** on topic “Artificial Intelligence for Sustainable Development” organized by Department of Computer Science Engineering, School of Engineering, BBDU Lucknow during 03-07 Oct 2023.

EDITORIAL BOARD

Prof. (Dr.) Shailendra Tahilyani
(Professor & Head)

Mr. Pankaj Verma
(Assistant Professor)

Student Coordinators

Dipika Srivastava
Janhavi Srivastava
Ayush Srivastava
Anuradha Yadav

“You have to dream before your dreams can come true.”

– Dr. A.P.J Abdul Kalam

WORDS OF THANKS

We are highly thankful to every member for their dedications and hard work. It is the team work that made this Newsletter possible. We on behalf of our team would also like to express our gratitude towards our readers.

THANK YOU